

A. smirna (Dall). With the last, San Diego to San Salvador.

A. infrequens (C. B. Ads.). A Panama species extending as far north as Cape San Lucas. Also found as fossil in Southern California.

A. planata (Cpr.). Described by Carpenter from specimens labeled from San Diego, but seemingly not known from there by present-day collectors.

There would seem to be a probability that further collecting and a careful examination, both as to identification and locality, of the material in other collections, would extend these known ranges.

SONORELLAS AND SCENERY

BY EDWIN E. HAND

“Master of human destinies am I.

I knock unbidden once at every gate.”

As Senator Ingalls said, it was my “hour of fate”. For years I have had a great desire and a standing invitation to go snailing in Arizona with the veteran collector, James H. Ferriss. Last summer, opportunity knocked, the gate opened, and my dream came true.

With Dr. W. T. Miller of Los Angeles to initiate us into the mysteries of Dame Nature’s landscape and all their beauties, botanical, geological and the rest, we three left Tucson on the afternoon of June 27th, headed toward the Grand Canyon. We made no schedule. We were to stop whenever and wherever any of us wished and stay as long as we could find entertainment. A joyful trio were we. Everything was new, strange, pleasing. We shall never forget the sights, sounds, thrills of this Arizona trip. We not only found “landscapes”, under his magic spell, but we found snails. And if the learned artist becomes not too deeply engrossed in his chosen work, be not surprised to meet a “*milleri*” from California in the near future.

Our first camp was in the desert solitude miles away from anywhere. We made our frugal fire, our magic meal, and then our bed in the open under the stars, amidst sand and sage, in the shade of a palo verde. Scattering desert vegetation and sand extended in every direction, and over all the blue, and the stars so bright, so near, so friendly to us. It was hot awhile, then cool, and ere dawn, with all our blankets, we were cold.

We are often asked: "But weren't you afraid of rattlesnakes?" There are ten rattlers in Arizona and Mr. Ferriss needs only three to complete his collection. Therefore, we were looking for them all the time but saw not one. A horned toad, mailed home, presented her new owner with seventeen little ones just after her arrival. That is the most exciting adventure we had 'mongst reptilia.

The giant cacti (*Carnegia gigantea*) were abundantly decorated with what I thought were flaming scarlet flowers, but friend Ferriss soon taught us that they were ripe fruits. Long poles enabled us to get enough to thoroughly appreciate their fig-like lusciousness. The birds, bees and other creatures enjoy them too and it seemed a shame to rob them of their harvest. But the miles and miles of the "trees" in every direction seemed evidence that there was plenty for all. This first taste of the quiet of the desert was repeated many times on our trip and we city dwellers loved it so we never tired of its restfulness.

Our chariot was a Ford, and it is still beyond my comprehension how anything made of metal by mere man can stand up under the millions of maulings administered.

But on we go past Florence and Superior. Here on Picket Post Mountain we found our first shells and got a good taste of desert savagery, as we nearly perished from thirst in our too eager attempt. But it taught us to go slower next time, and after cooling off at Superior we were all right again.

Passing over the finished part of a new road, we ran upon a peculiar and decided novelty *re* the road-builders near Miami. This region used to be an Apache stronghold and as late as fifty years ago was dangerous for a white man to

traverse. Now, these same Indians are found to be very faithful road workers. Their villages are pitched near by and the braves are helping their white brothers build the roads. But no, they are not quite willing to fraternize with us. For in conversation with the big, young fellows, unusual specimens of the physical man who have been educated at the government schools, we learn that: "The teachers don't know anything," and "All the white men are dishonest." Our efforts to argue this away were unavailing, for these men spoke from experience. Later facts, to our shame be it said, showed that they spoke the truth.

Soon we sight Salt River and learn that it is dammed at Roosevelt. We skip along over knolls and mesas, skirting the south shore of the lake for twenty miles or more and detour one mile to cliff dwellings. A stop here and a tramp up the fine trail to the former abode of an ancient people, leads us to our next *Sonorella*. A new one, Mr. Ferriss said, and right in Chief Montezuma's dooryard. We camped here, found the accompanying spring of the people of long ago, drank, bathed, loved the tropical grove of walnuts, cottonwoods, willows, but found no more snails.

We lingered long on the Roosevelt Dam boulevard, the most impressive work of man our eyes ever beheld. We ate a fine dinner at that "shadow of a rock in a weary land," Apache Lodge, replenished our gas, air, water, and then on to Mills Canyon, where we easily found a large colony of *Sonorellas*. On the top of a hill overlooking the water we made our camp. The lake is nearly fifty feet lower than usual. And now we are to see so many signs of suffering man and beast when no rain falls in a dry climate and the water-holes fail. One woman had a dozen young calves she was trying to raise whose mothers had perished of thirst. Whitening bones, some covered with dried hides, some naked, were frequent sights.

Now we are in the Mogollon Mountains, Tonto Basin region, Zane Grey's country. We did not see him this time and forebore to visit his hunting lodge, sixteen miles by trail from Payson. But we heard much about him and his Pleas-

ant Valley and had long talks with his guide, Al Doyle, at Flagstaff. Mr. Ferriss knows everybody, as this is his fifteenth trip to Arizona. We found no snails but the cutest little cacti ever! One I mailed home is watching me as I write and holding for me on each of its curved spines a pleasant memory.

Three miles off our road we see two acres of grapes and alfalfa right on top of a natural bridge. And you cannot realize that you are on an arch 150 feet high, 140 wide, 400 long and 75 thick until you follow the path around and down, get underneath and gaze upward. It was as interesting as geometry to solve this "pons" saeculorum. A large spring carries lime compounds in solution. It flows to the granite canyon walls of Pine Creek. On evaporating, the deposit of calcareous tufa tries to fill the canyon bed of the creek. Here a battle royal is fought and the overwhelmed stream capitulates with a subway, Q. E. D. Just like the ice bridges we crossed in the Sierras, the avalanche blocks the stream, which bores its way through, and the gentle murmurs from below whisper its presence.

Before leaving this oasis we found a *Sonorella* which Mr. Ferriss declared to be the queen of them all. And here I solved my mystery—how to find new species. When I am tired out and have said very decidedly, "Come on, let's quit. There is absolutely nothing here," my companion hears not, heeds not, but soon sings out, "Sonorella, one bone. A fine one. New species." Then I go to work again and soon find a "live" one. Dark catches us with fifteen or twenty good dead ones and four or five live ones. And how we had to dig for them! The sun shone merrily. It was very hot but patience, perseverance, and hard work accomplished the impossible. And is not this a key to success in every walk of life?

We were glad to run into Pine in Pleasant Valley. A place ever to cherish and to which we are to return after our mentor, Dr. Miller, leaves us at Grand Canyon. Pine is in a valley about three miles long and one wide. Its elevation is 5500 feet and black lava mountains 3000 feet higher covered

with noble pines hem it in. A clear stream, fed by springs miles away, runs through Main Street and the people dip their pails into this and carry the water into their homes only a few feet away. They also use this stream to irrigate their orchards and gardens. Peaceful Pine, Pleasant Valley, balm for tired humans! How we worked the slides on those lava mountains! And we worked our "secret" too 'midst soaking rain and pelting hail, often finding shells after all hope was gone. Here we decided that the rainy season is not the best time to find snails. Scores of "marks" on the rocks but no "markers" led Mr. Ferriss to announce that "Madam snail had gone gadding". We found one right out in the open on her way home.

Through Coconino County (200 miles by 150 miles, larger than several eastern states), over natural roads good when it doesn't rain, we ride to Flagstaff. As we left the desert and approached the forest preserve, how the trees ran to meet us! First the youths, then their parents by scores and hundreds hemmed us in and gave us a royal welcome. The pine forest through which we ride is second only to the President's preserve on Kaibab Plateau beyond the north rim of Grand Canyon. (Read Emerson Hough in *Saturday Evening Post*.)

On past the snow-capped San Francisco peaks, Sunset Crater, and the edge of the Painted Desert to Grand View, we speed our way. Now we camp in the desert and now in the pine forest. But there are no snails to be found here. And then the sunset and sunrise views of Grand Canyon, the pictures, mid storm and sun—the despair of artists and poets—what can a poor snailer say or do? Just drink it in and afterward try to remember. That's all. Down Bright Angel Trail, not as Dr. Cooke on a mule, but on our own feet, we took two days for the trip. Where he saw his fifteen or twenty we found several hundred, all dead. There is an immense dike of limestone here in the midst of the sandstone and snails must have recently flourished. But there were very few live ones. We spent the night in an old mine tunnel 'midst age-old granite walls. Theodore Roosevelt says truly: "The sullen rock walls towered hundreds of feet aloft, with

something about their grim savagery that suggested both the terrible and the grotesque. No one could paint or describe it save one of the great masters of imaginative art or literature—a Turner or Browning or Poe.”

This night, ere we went to sleep, Dr. Miller told us of the Arnold Arboretum of Bailey's *Cyclopedia of Horticulture* and of many interesting phases of his life. He said he was going to put us to sleep. But his stories had the opposite effect. The morning bath in the pools edging the roaring Colorado, the little fire on its clean sand, to boil our coffee, the walk back, the odor of fragrant shrubs in the rain; these are delightful memories of the Grand Canyon. We made good use of Harvey's restaurant, of Kolb Brothers' studio, and Uncle Sam's post-office, mailing cacti, agaves, etc. to Washington and to our homes. And we spent part of two days and nearly all night with the grand old scout, W. W. Bass. If you visit this region do not fail to meet Bass. And the treatment he has received from "the white man" makes that of the Indian read like a romance of benevolence. 'Tis Sunday, July 17th, and more than one-third of our life departed when Dr. Miller left for his home in Los Angeles.

Mere chance took us to Walnut Canyon, the fourth of the great, outstanding features of our trip. Here we spent a week under very pleasant auspices. The meeting of Mr. Ferriss and his old friends of the Catalina Mountains, Mr. and Mrs. Erickson, who are now the custodians of this National Monument, was worth traveling miles to see. The dinners served by this estimable couple to two auto-campers were worth traveling miles to taste. The scenery and cliff dwellings of Walnut Canyon are worth a stop over at Flagstaff to visit. They are only ten miles from town over an excellent road. There are miles and miles of cliff dwellings, two and, in some places, three tiers high in this rugged, twisted gash in the earth. There must have been a half-million inhabitants here, judging by the broken pottery scattered so thickly about. We found a few hundred large shells and hundreds of thousands of little fellows. Your humble correspondent had the wonderful privilege of going clear to the bottom of

the canyon with Dr. Thornber of Tucson, who was making first-hand notes on the shrubs of Arizona. Here I found for the first time the wild potato, and an *Oenothera* with corolla tube seven inches long and caulis reduced to zero. The flower came from a dandelion-like rosette of leaves and was a delicate rose color. It grew on the edge of a wet swale on the rim and there were nineteen individuals in the colony.

Mount Elden and the craters and canyons called us. We found small shells everywhere, but few large ones in the next four weeks. The rain descended upon us and soaked us. The sun or camp fire dried us. We did not catch cold as we would have done at home. We were living the outdoor life and loved it so. When the rainy season came we added mushrooms to our menu. Mushrooms both edible and questionable sprang up everywhere. For weeks we saw a dozen new kinds a day. What a paradise for a mycologist! There were all colors, shapes and sizes. Near the forest lookout on Mt. Mahan we measured a big one. It was only eleven inches in diameter. We thought surely it was a foot!

We returned to Peaceful Pine, eighty-five miles, for some property we had cached there, expecting to return to Flagstaff to entrain. The rains had made the roads impassable, so we turned to the right, toward Winslow. This wild road was as good as a boulevard, and soon led us from the pine forest to the desert edge with its scanty junipers and pinons. This was a remarkable change and the bleak desolation of those last twenty or thirty miles seemed to rise and strike us in the eyes. The mirage did not plague us as it did the prairie schooners of yore, for we had plenty of water and gas and speed.

One of us must return to civilization, and one go on and on, ever westward, through the great desert, to California. This is the realization of a beautiful dream of searching for beautiful Soronellas 'midst the beautiful scenes of Arizona.